

CLAIMS

1. An energy beam irradiating apparatus comprising:
a substrate holder to which a disc-like substrate
5 is attached, including a holder main part on which the
disc-like substrate is mounted and a pressing plate,
the disc-like substrate being held between the holder
main part and the pressing plate with a formation
region of an irradiation pattern on the disc-like
10 substrate and a partial region of at least one of an
outer edge and an inner edge of the disc-like substrate
being exposed;
a moving stage that moves the substrate holder;
an energy beam irradiating mechanism that
15 irradiates a surface of the disc-like substrate
attached to the substrate holder with an energy beam;
and
a control unit that causes the moving stage to
move based on a movement pattern with a reference point
20 set in advance on the moving stage as a reference so
that an irradiation pattern is formed on the surface of
the disc substrate by irradiation with the energy beam,
the control unit calculating, during formation of the
irradiation pattern, a center of the disc-like
25 substrate based on at least one part of an outline of
the exposed outer edge or inner edge of the disc-like
substrate and setting the calculated center as the
reference point.
- 30 2. An energy beam irradiating apparatus according to
Claim 1, wherein at least one positioning pin that

regulates movement of the disc-like substrate attached to the substrate holder is disposed on at least one of the substrate holder and the pressing plate.

- 5 3. The energy beam irradiating apparatus according to Claim 1, wherein the energy beam is an electron beam and the pressing plate is formed using a conductive material.
- 10 4. The energy beam irradiating apparatus according to Claim 2, wherein the energy beam is an electron beam and the pressing plate is formed using a conductive material.